

# PALM-BASED COSMETIC PRODUCTS WITH PALM VITAMIN E

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JUNE 2004

# 245

MPOB TT No. 239-242

MPOB INFORMATION SERIES

ISSN 1511-7871

- MPOB TT No. 239 - NIKI Silky Soft Hand Cream
- MPOB TT No. 240 - NIKI Vitamin E Night Cream
- MPOB TT No. 241 - NIKI Soothing & Smoothing Foot Cream
- MPOB TT No. 242 - NIKI Revitalizing Body Lotion

**F**or the past few years, MPOB has been approached by many small and medium scale cosmetic company for research and development of a product or a range of cosmetic products utilizing palm-based oleochemicals as the major raw materials. This positive development is not unfounded as recent development in the cosmetic industry is advocating the use of natural, renewable and plant derived ingredients. Currently, palm-based oleochemicals, such as cosmetic grade fatty acids with carbon chain ranging from C14 – C16, liquid wax esters, capric/caprylic triglycerides, fatty alcohols, fatty alcohol ethoxylates and glycerin are widely used in cosmetic and personal care formulations to serve various functions such as emulsifiers, humectants, emollients, lubricants and conditioners. Natural active ingredients extracted from palm oil and other local plants are also used to give a unique impact on the formulated products.



Figure 2. Palm-based skin care products with palm vitamin E.

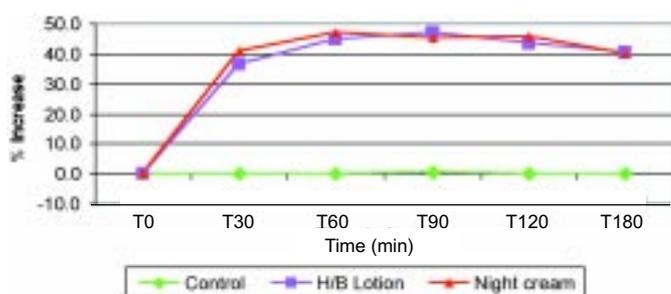


Figure 1. Increase in skin hydration of products vs. control (untreated).

ISSN 1511-7871



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Palm oil is unique as it contains both tocotrienols and tocopherols unlike other vegetable oils which contain mainly  $\alpha$ -tocopherol as the major components of their vitamin E. Vitamin E, especially tocotrienols have been proven to be an excellent antioxidants which inhibit the formation of lipid peroxides and thus contribute to the anti-wrinkle properties.

The effect of topical application of vitamin E on skin has been studied (Mayer *et al.*, 1994). The vitamin E protects the skin in three ways. In the cell membrane, vitamin E acts as radical scavenger and stabilizes the membranes against hydrolysis of the phospholipids as a result of oxidative damage. Photoaging is caused by short wave component of sunlight defined as UVA (400 to 320 nm) and UVB (320 to 280 nm). Clinical consequences of UVB-induced sunburn such as erythema, edema and increased skin sensitivity can be reduced by topical application of vitamin E due to UV absorption (maximum at 290 nm) and rapid development of protective effects. Reduction in photoaging will then help to reduce wrinkles.

The range of palm-based skin care products with palm vitamin E as the active ingredient highlighted in this publication is a result of a collaboration between MPOB and ACC Industries Sdn Bhd.

### **PALM-BASED VITAMIN E CREAM AND LOTION**

When our skin is clean and refresh, it needs protection and replenishment of lost natural oil and moisture regulators. Palm-based moisturizing foot cream, hand cream and hand and body lotion with palm vitamin E are designed to protect the skin from the harsh environment and the detrimental effect of UV rays during daytime. The presence of palm vitamin E which also contains some other minor component such as squalene, carotene and coenzyme Q<sub>10</sub> (Choo, 2000) helps to moisturize the skin throughout the day.

Night cream as the name implies is to be used at night. It is of high oil content and do not dry quickly but stay oily long enough to be massaged into the skin. This massaging action is very beneficial to skin tissues and helps in the penetration of the active agents present in the products. Palm-based night cream with palm vitamin E helps to replenish and moisturize the skin throughout the night.

Efficacy study conducted on 20 human volunteers on two of the products *i.e.* the night cream and hand and body lotion showed that each product is able to moisturize the skin after a single application and the

skin remains moisturized even after 3 hr of application as compared to the untreated area (Rosnah, 2004).

### **CONCLUSION**

The cosmetic and personal care market in Malaysia is growing very fast especially with the increase in per capita income. Consumers are generally becoming more educated, with strong knowledge on cosmetic products. Educated consumers continue to push cosmetic manufacturers to produce natural and multifunctional products which are not only effective but also safe to use. Nature has long shown her presence in some personal care products, but as people strive to live longer and healthier lives, natural ingredients are becoming standard throughout all product categories. Therefore, locally available active ingredients, if properly researched and documented, could offer added benefits to cosmetic formulations. For locally produced cosmetic products to effectively compete with the more established imported brand, proper research and development should be carried out. Besides know-how on the formulation aspects, the microbiology, safety and efficacy data should be established to support those products.

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